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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,283	11/26/2001	Jin Young Chun	CU-2732 RJS	8829
26530	7590	07/23/2004	EXAMINER SEFER, AHMED N	
LADAS & PARRY 224 SOUTH MICHIGAN AVENUE, SUITE 1200 CHICAGO, IL 60604			ART UNIT 2826	PAPER NUMBER

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/994,283

**Applicant(s)**

CHUN ET AL

AK

**Examiner**

A. Sefer

**Art Unit**

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/13/2004 has been entered.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 3 does not include reference numerals 12, 16, 21, 22 and 24. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bruzzone et al. (“Bruzzone”) WO 99/08151.

Bruzzone discloses (figs. 1 and 3B and page 8, lines 20-30) a liquid crystal display device comprising: a supporting column 136 provided for an upper substrate 14/122B and vertically

Art Unit: 2826

extended from the upper substrate to the lower substrate so as to maintain a uniform cell gap therebetween; a contact part 124 provided for a common line disposed at a peripheral region outside an active area of the lower substrate 12/122A opposite to the upper substrate, wherein the contact part faces the supporting column at a corresponding position so as to guide electrical communication between the supporting column and the common line; and an electrically conductive layer 128 formed on the outer surfaces of the supporting column and the upper substrate, wherein a portion of the electrically conductive layer on the supporting column is joined to the common line within the contact part so as to establish a signal interconnection between the lower substrate and the upper substrate.

5. Claims 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruzzone.

Bruzzone discloses (figs. 1 and 3B and page 8, lines 20-30) a method for fabricating a liquid crystal display device, comprising: providing a supporting column 136 for an upper substrate 122B, wherein the supporting column is vertically extended from the upper substrate to a lower substrate so as to maintain a uniform cell gap between the outer surface of the upper substrate of the upper substrate and the lower substrate; forming an electrically conductive layer 128 or ITO (as in claim 5) on the outer surfaces of the supporting column and the upper substrate; providing a contact part 124 for a common line disposed at a peripheral region outside an active area of the lower substrate 122A confronting the upper substrate, wherein the contact part faces the supporting column at a corresponding position; and uniting the lower substrate and the upper substrate so that a portion of the electrically conductive layer on the supporting column is joined to the common line within the contact part, thereby establishing a signal interconnection between the lower substrate and the upper substrate.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruzzone in view of Fujimura et al. ("Fujimura") USPN 5,973,763.

Bruzzone discloses the device structure as recited in the claim, but does not disclose an insulating layer and a contact part formed in the insulating layer.

Fujimura discloses (see figs. 1, 2, 7-9 and col. 7, lines 1-6) a liquid crystal display device comprising: a supporting column 13 provided for an upper substrate 20 and vertically extended from the upper substrate to the lower substrate 10 so as to maintain a uniform cell gap therebetween; a contact part 17/18 provided for a common line disposed at a peripheral region outside an active area A of the lower substrate opposite to the upper substrate, wherein the contact part faces the supporting column at a corresponding position so as to guide a communication between the supporting column and the common line, wherein an insulating layer provided for a common line, and a contact part being a contact hole formed in the insulating layer so as to expose a portion of the common line.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Fujimura's teachings with Bruzzone's device since that would provide a high-definition and bright liquid crystal device as taught by Fujimura.

Art Unit: 2826

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruzzone in view of Fujimura.

Bruzzone discloses the method for fabricating a liquid crystal display as recited in the claim, but does not disclose insulating layer and a contact part formed in the insulating layer.

Fujimura discloses (see figs. 1, 2, 7-9 and col. 7, lines 1-6) a method for fabricating liquid crystal display device comprising: providing a supporting column 13 having an outer surface for an upper substrate 20 and vertically extended from the upper substrate to the lower substrate 10 so as to maintain a uniform cell gap therebetween; providing a contact part 17/18 for a common line disposed at a peripheral region outside an active area A of the lower substrate opposite to the upper substrate, wherein the contact part faces the supporting column at a corresponding position so as to guide a communication between the supporting column and the common line, wherein an insulating layer is provided for a common line, and a contact part being a contact hole formed in the insulating layer so as to expose a portion of the common line.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Fujimura's teachings with Bruzzone's device since that would provide a high-definition and bright liquid crystal device as taught by Fujimura.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Art Unit: 2826

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS  
July 20, 2004

NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

